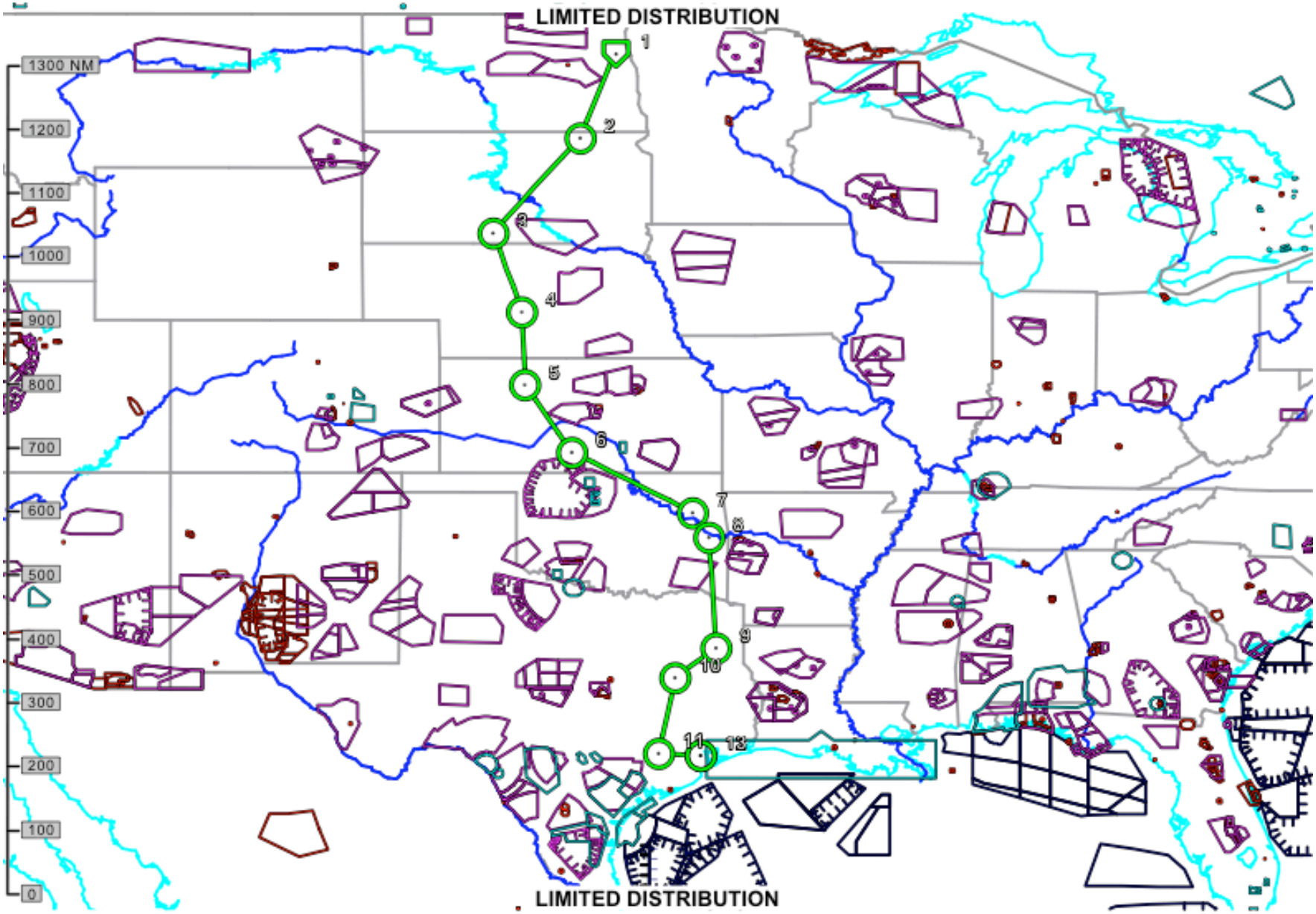
INTEX-B: Test/transit flight 2 (February 24, 2006; Friday)

This was the second and final scheduled INTEX-B test flight with the main objective of testing instrument performance under a variety of atmospheric and aircraft operational conditions. The test flight started at Grand Forks and terminated at Ellington Field in Houston. This reflected a change in plans necessitated by serious hanger issues at Grand Forks. The basic flight track and profile is shown in the slides below. Total flight duration was 3.8 hours with a 10 am (LT) takeoff. It was possible to test instrument performance at a variety of altitudes under a variety of aircraft speeds as well as humidity and pollution conditions.

A large fraction of the instruments were able to operate normally. In several cases difficulties detected in the first test flight were fixed for the second test flight. None of the instruments encountered high altitude sampling difficulties and the DC-8 “nominal” speeds (220-440 knots) and standard cabin pressure protocol worked very well for all PIs. Some of the instruments that had difficulties in the first test flight needed more time on the ground than was available due to our unscheduled departure from Grand Forks. The GT-LIF instrument was able to get one of the two lasers up and would require additional work on the ground. AROTAL discovered some additional problems and need time on the ground to fix these. They also need time at night to align their lasers. Peroxide instrument has developed some leaks that were difficult to detect in-flight. These 3 instruments need time on the ground and this is being planned in Houston. Because of our unscheduled arrival, the facilities in Houston are not yet ready but are expected to be so by Monday (2/27) morning. Overall, this was a successful test and transit flight that went exactly according to plan.

The navigational data are available at URL: http://www.dfrc.nasa.gov/Research/AirSci/DC-8/ICATS/index.html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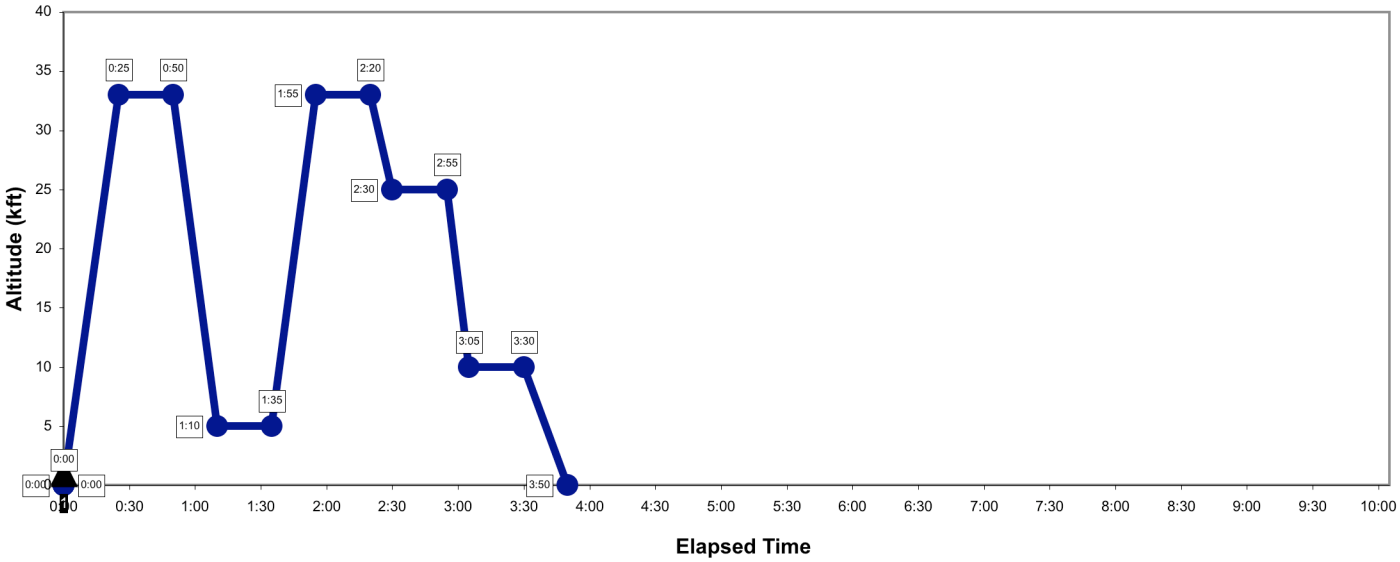

Note: In-Progress profiling in **Blue**; Spirals in **Red**; Way points annotated with triangles (▲).